Embed stormwater use in city planning

Potable water resources are being depleted at an alarming rate worldwide. Storm water is a hugely under-utilized resource that could help as extreme weather events become more frequent.

The challenges of collecting and using storm water mean that the practice is not widespread. Rainfall tends to be seasonal, so storm water must be stored for use in dry periods in natural underground aquifers (see A. Mankad et al. *J. Clean. Prod*. **89**, 214–223; 2015) or in specially built reservoirs. The reliance of such projects on the weather can make the costs hard to justify.

Storm water may also be heavily polluted and is expensive to treat. This can make alternatives such as imposed water rationing or water transfers from other areas more attractive — despite their human and environmental costs. Stormwater treatment would be more economically viable if less-purified water were used for non- drinking purposes. This would require wider public education, because the idea of recycled water is anathema to many.

For expanding cities, ways to deploy storm water will need to be embedded into urban planning. The technology is already available and could be tailored to different situations (see, for example, T. D. Fletcher et al. *J. Environ. Qual*. **37**, S-116– S-127; 2008; A. E. Barbosa et al. Water Res. 46, 6787–6798; 2012).

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